



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,292	12/16/2004	Mark W. Cater	25029/101/101	7055
40306 7590 05/13/2008 SHEWCHUK IP SERVICES 3356 SHERMAN CT. STE. 102 EAGAN, MN 55121				
EXAMINER KASHNIKOW, ERIK				
ART UNIT 1794		PAPER NUMBER		
MAIL DATE 05/13/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/518,292

Applicant(s)

CATER ET AL.

Examiner

ERIK KASHNIKOV

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-28 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
4. In this instance the term non-aqueous, which was entered in the preliminary amendment is considered to be new matter. The cited phraseology clearly signifies a "negative" or "exclusionary" limitation for which the applicants have no support in the original disclosure. Negative limitations in a claim which do not appear in the specification as filed introduce new concepts and violate the description requirement of 35 USC 112, first paragraph, *Ex Parte Grasselli, Suresh, and Miller*, 231 USPQ 393, 394 (Bd. Pat. App. and Inter. 1983); 783 F. 2d 453.
5. The insertion of the above phraseology as described above positively excludes aqueous products, however, there is no support in the present specification for such exclusions. While the present specification is silent with respect to the use of aqueous

Art Unit: 1794

products, is noted that as stated in MPEP 2173.05(i), the "mere absence of a positive recitation is not the basis for an exclusion."

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Given the addition of the last two lines of the claim it is unclear what is being claimed, whether a composition or a water permeable enclosure comprising the composition is being claimed is unclear.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Akao et al. (US 5,492,741).
11. In regards to claims 1 and 2 Akao et al. teach an oxygen scavenging composition which can consist of glucose oxidase, glucose and a multitude of other chemicals. Akao et al. further teach that the oxygen scavenging system can further comprise a

combination of these materials. In regards to these claims the glucose would act as the energy source and glucose oxidase would act as the enzyme system (column 30 line 62 – column 31 line 22). Akao et al. further teach the inclusion of sodium bicarbonate and iron which would act as the non aqueous neutralizing agent (column 31 lines 15-17). Since sodium bicarbonate is a preferred neutralizing agent taught by Applicant's all the properties of the neutralizing agent taught in the instant claims are inherent. Since the materials used by Akao et al. are the same as those taught in the dependant and independent claims of the instant application they would be inherently dry. In regards to the last 2 lines of claim one, since Akao et al. teach the same materials as Applicant's all the limitations of the last two lines would also be inherent.

12. While it is recognized that the phrase "consisting essentially of" narrows the scope of the claims to the specified materials and those which do not materially affect the basic and novel characteristics of the claimed invention, absent a clear indication of what the basic and novel characteristics are, "consisting essentially of" is construed as equivalent to "comprising". Further, the burden is on the applicant to show that the additional ingredients in the prior art, i.e. iron, would in fact be excluded from the claims and that such ingredients would materially change the characteristics of the applicant's invention, See MPEP 2111.03.

### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 3-4, 6-10, 12-19 and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akao et al. (US 5,492,741) in view of Lehotonen et al. (US 4,996,062) and dictionary.com used as evidentiary reference (<http://dictionary.reference.com/browse/dextrose>).

15. As stated above Akao et al. teach an oxygen scavenging composition, and in regards to claim 16 specifically teach sodium bicarbonate as a component of the neutralizing agent, glucose as the energy source and glucose oxidase as the enzyme system, but are however silent regarding the addition of catalase.

16. Lehotonen et al. teach a foodstuff package which contains an oxygen scavenging system (column 3 lines 31-41).

17. In regards to claims 3-4, 6-10 and 27 Lehotonen et al. teach a package which contains foodstuff, as well as a mixture of the enzymes glucose oxidase and catalase, which is used to eliminate oxygen from the atmosphere (column 3 lines 31-41).

18. In regards to claims 6 and 7 Lehotonen et al. also teach the use of glucose as a substrate in their oxygen scavenging system (column 5 lines 65-68).

19. In regards to claim 9, dextrose is one of two stereoisomers of glucose, and is the most common form of glucose, and therefore would be obvious to one of ordinary skill in the art at the time of the invention (See the definition of glucose as found on <http://dictionary.reference.com/browse/dextrose>.)

Art Unit: 1794

20. In regards to claims 12- 13 Lehotonen et al. teach that glucose oxidase be present in quantities of 10-1000 Units/kg (column 6 line 5), and catalase in quantities of the same amount (Column 3 line 57-58) this meets the lower range of applicants claimed ranges.

21. In regards to claim 24 Lehotonen et al. teach that the composition can be incorporated into the package prior to the addition of the food product (column 6 lines 49-52).

22. In regards to claims 25-28 Lehotonen et al. teach that the composition can also be embodied in a 3 dimensional form, when it is added to the actual food product (column 6 line 42-44), or sprayed onto the food product surface (column 6 lines 44-48).

23. In regards to claim 14 absent a showing of criticality with respect to the amount of glucose, it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the amount of glucose through routine experimentation in order to achieve an effective oxygen scavenger. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

24. In regards to claims 15 and 17-19 it would have been obvious under the guidelines presented in the preceding paragraph to vary the amount of glucose and neutralizing agent present in order to achieve an effective oxygen scavenger.

25. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the package containing an oxygen scavenging system of Akao et al. with the oxygen scavenging system of Lehotonen et al. because the package of Akao et

al. which has the ability to be heat sealed and the ability to be made by a fully automated process (column 2 lines 4-7) would benefit from the inhibition of growth of aerobic spoilage organisms, of the system of Lehotonen et al. (column 3 lines 30-35).

26. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akao et al. (US 5,492,741) in view of Lehotonen et al. (US 4,996,062) and Stougaard et al. (US 6,251,626).

27. As stated above Lehotonen et al. and Akao et al. teach a composition for use as an oxygen scavenging system for food. However both Lehotonen et al. and Akao et al. are silent regarding the use of hexose oxidase.

28. Stougaard et al. teach that hexose oxidase is an enzyme that in the presence of oxygen can capable of oxidizing dextrose and a multitude of other reducing sugars (column 1 lines 19-20).

29. It would be obvious to one of ordinary skill in the art at the time of the invention to use this in the inventions of Lehotonen et al. and Akao et al. because this enzyme can utilize a broader range of substrates and therefore make the claimed invention more flexible (column 1 lines 27-28).

30. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akao et al. (US 5,492,741) in view of Lehotonen et al. (US 4,996,062) and Ernst (US 5,284,871).



31. As stated above Lehotonen et al. and Akao et al. teach a composition for use as an oxygen scavenging system for food. However both Lehotonen et al. and Akao et al. are silent regarding the use of water permeable enclosures for the composition.

Lehotonen

32. Ernst teaches storing an oxygen scavenging system in a water permeable container enclosed with the product, including pouches (column 8 line 67 to column 9 line 9). It would also be obvious to one of ordinary skill in the art that a pouch and enclosed pouch and a sachet are all different design choices for a pouch.

33. It would be obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Lehotonen et al. and Akao et al. with the invention of Ernst because the invention of Ernst further protects foods by preventing the release of radicals into the food (column 9 lines 37+).

### ***Response to Arguments***

34. Applicant's amendment and arguments filed 02/08/2008 were persuasive in overcoming the previous rejections of record.

35. Applicant argues that single Ernst enclosure might not be filled with compositions from both references. Examiner notes that while Ernst do not disclose all the features of the present claimed invention, they are used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a

certain concept, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

36. While it is recognized that the phrase "consisting essentially of" narrows the scope of the claims to the specified materials and those which do not materially affect the basic and novel characteristics of the claimed invention, absent a clear indication of what the basic and novel characteristics are, "consisting essentially of" is construed as equivalent to "comprising". Further, the burden is on the applicant to show that the additional ingredients in the prior art, i.e. iron, would in fact be excluded from the claims and that such ingredients would materially change the characteristics of the applicant's invention, See MPEP 2111.03.

### ***Conclusion***

37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Strobel et al. (US 5,766,473) and Hitzman (US 4,414,334) teach oxygen scavenging systems but are silent regarding a non aqueous buffer agent.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIK KASHNIKOW whose telephone number is (571)270-3475. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (Second Friday off).

Art Unit: 1794

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erik Kashnikow  
Examiner  
Art Unit 1794

/Callie E. Shosho/  
Supervisory Patent Examiner, Art Unit 1794